CLAIMS

What is claimed is:

1   1.   In a digital communications network, a method comprising:

2   checking a multiplexed connection's bandwidth capacity to carry a call

3   over a link; and

4   overflowing the call onto a non-multiplexed connection, when the

5   multiplexing connection's bandwidth is insufficient to carry the call.

1   2.   The method of claim 1, further comprising sending the call over the

2   multiplexed connection when the multiplexed connection's bandwidth is sufficient

3   to carry the call.

1   3.   The method of claim 2, wherein overflowing the call comprises:

2   adding a single non-multiplexed connection over the link per call;

3   transmitting the call over the non-multiplexed connection; and

4   tearing down the single non-multiplexed connection once the call is

5   completed.

1   4.   The method of claim 3, wherein the multiplexed connection is a

2   multiplexed Q.AAL2 signaling channel.

1   5.   The method of claim 4, wherein the non-multiplexed connection is a non-

2   multiplexed Q.AAL2 signaling channel.

1   6.   An apparatus for use in a digital communication network, comprising:

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2   means for checking a multiplexed connection's bandwidth capacity to

3   carry a call over a link; and

4   means for overflowing the call onto a non-multiplexed connection, when

5   the multiplexing connection's bandwidth is insufficient to carry the

6   call.

1   7.   The apparatus of claim 6, further comprising means for sending the call

2 over the multiplexed connection when the multiplexed connection's bandwidth is

3 sufficient to carry the call.

1   8.   The apparatus of claim 7, wherein the means for overflowing the call

2 comprises:

3   means for adding a single non-multiplexed connection over the link per

4   call;

5   means for transmitting the call over the non-multiplexed connection; and

6   means for tearing down the single non-multiplexed connection once the

7   call is completed.

1   9.   The apparatus of claim 8, wherein the multiplexed connection is a

2 multiplexed Q.AAL2 signaling channel.

1   10.   The apparatus of claim 9, wherein the non-multiplexed connection is a

2   non-multiplexed Q.AAL2 signaling channel.

1   11.   A computer-readable medium having stored thereon a plurality of

2 instructions, said plurality of instructions when executed by a computer, cause

3 said computer to perform the method of:

4   checking a multiplexed connection's bandwidth capacity to carry a call

5   over a link; and

6   overflowing the call onto a non-multiplexed connection, when the

7   multiplexing connection's bandwidth is insufficient to carry the call.

1   12.   The computer-readable medium of claim 11 having stored thereon

2   additional instructions, said plurality of instructions when executed by a

3   computer, cause said computer to further perform the method of sending the call

4   over the multiplexed connection when the multiplexed connection's bandwidth is

5   sufficient to carry the call.

1   13.   The computer-readable medium of claim 12 having stored thereon

2   additional instructions, said plurality of instructions when executed by a computer

3   for overflowing the call, cause said computer to further perform the method of:

4   adding a single non-multiplexed connection over the link per call;

5   transmitting the call over the non-multiplexed connection; and

6   tearing down the single non-multiplexed connection once the call is

7   completed.

1   14.   The computer-readable medium of claim 13, wherein the multiplexed

2   connection is a multiplexed Q.AAL2 signaling channel.

1   15.   The computer-readable medium of claim 14, wherein the non-multiplexing

2   connection is a non-multiplexed Q.AAL2 signaling channel.

1   16.   A digital communication switch comprising:

2   a processor coupled to a bus;

3   a storage device coupled to the bus storing instructions executed by the

4 processor; and

5   a buffer for storing voice data cells,

6 wherein the processor monitors the available bandwidth of a multiplexed

7 connection, receives a voice call, and routes the call according to the available

8 bandwidth.

1   17.   The switch of claim 16, wherein the processor overflows the call onto a

2 non-multiplexed connection when the available bandwidth of the multiplexed

3 connection is insufficient to carry the call.

1   18.   The switch of claim 17, wherein the processor sends the call over the

2 multiplexed connection when the available bandwidth of the multiplexed

3 connection is sufficient to carry the call.

1   19.   The switch of claim 18, wherein the multiplexing connection is a

2 multiplexed Q.AAL2 signaling channel.

1   20.   The switch of claim 19, wherein the non-multiplexing connection is a non-

2 multiplexed Q.AAL2 signaling channel.